Abstract

A multi-layered tissue construct includes: a first layer comprising a first hydrogel; and a second layer comprising a second hydrogel, wherein the first layer is connected to the second layer at a first transition zone and wherein at least one of the first layer and the second layer further comprises a component selected from the group consisting of cells and a bioactive substance. Another multi-layered tissue construct includes: a first layer comprising a first hydrogel; a second layer comprising cells of a first type, wherein the second layer is disposed on the first layer; and a third layer comprising a second hydrogel and optionally cells of the first type encapsulated in the second hydrogel, wherein the third layer is disposed on the second layer. Methods for producing these multi-layered tissue constructs are also disclosed.